DOCUMENT RESUME

ED 181 166 UD 020 128

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TITLE Schooling to Learning: The Eighties and Beyond.
PUB DATE 8 Jan 80
NOTE 17p.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Curriculum Development; *Educational Alternatives; Elementary Secondary Education; *Futures (of Society); Higher Education; Information Systems; Long Range Planning; *Relevance (Education); *Social Change; Teacher Education; *Technological Advancement; Trend Analysis
IDENTIFIERS Minnesota Experimental City

ABSTRACT

The next decades offer the possiblity of substantive changes in our perceptions of learning. The potential changes would affect all levels of learning, from early childhood to adulthood. As a result, teacher education programs must consider coming transitions. For such transitions to occur, educators should first examine the potential alternative futures by considering such areas as energy, population, ecology, technology, oceans, space, and lifestyles. Second, the implications for education of these potential global conditions need analysis. Third, educators must determine whether the global dilemmas and their educational implications have significance for practical now-oriented programs within current budgets and political realities. There is mounting evidence to support the notion that current education systems are obsolete. Education must develop new kinds of institutions which would incorporate current and potential global conditions into the curriculum. Such approaches as the proposed Minnesota Experimental City, a living/learning environment, provide one option. Other approaches, such as the school-within-a-school method, would require very little in terms of money or organizational effort, but could provide the impetus for continuing and greater transformations of the educational system to better prepare students for the future world in which they will live. (Author/RLV)

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ED181166

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SCHOOLING TO LEARNING: THE EIGHTIES AND BEYOND

by

Don Glines

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
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"Institutions of higher education in 1995 will not look like those we see today. Our institutions will be different in ways that will be startling, particularly considering the almost unchanging nature of these institutions in the last century." Alfred Bork, in forecasting fifteen years hence, may not prove to be correct, but such projections give hope that finally schools and colleges will change - that they will begin to move away from schooling toward learning. Many educators have long stated: "If schools and colleges are to be significantly better, they must be significantly different."

The potential changes ahead would affect all levels of learning - from early childhood through adult - from birth through death. As a result, those programs now known as teacher education should consider possible coming transitions - from where they are now to approaches appropriate for an era of transformation. If this is an ahistorical period of time, as many writers claim, universities must both lead and follow the public and private local school programs; a new era of co-operation is required. New Age professional preparation will need to evolve a different person - one who can lead new directions in education; at the same time, schools will need to rethink their programs to provide roles for the new generation of educators who will help mold improved learning delivery systems.

What evidence supports the view that society and education should create new approaches during the coming decade? Currently there are approximately one hundred books and articles being published each month providing data, resources, and

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challenges related to the years ahead; many of these are reviewed in Future Survey. Present educators should analyze these available sources. There is a need to help create preferable futures; people may not be content with current probable, or many of the possible, alternative futures which lie ahead. Creating a preferable future - imagining and inventing - is an essential task. According to the literature of the futurists, visionary futurism is a requirement if humankind is to successfully move from the Industrial Age to a New Age.

For such transitions to occur, educators should first examine, as well as possible, the potential alternative futures. There are at least sixty-four global topics which need consideration: energy, food, population, ecology, human values, cities, technology, oceans, space, pollution, human poverty and despair, and lifestyles are just a few parts of the whole.

Second, the implications for education of these potential global conditions need analysis. Do they have general meaning for all schools and colleges, or are the global crises and opportunities of no real concern to the education systems of the eighties? Are these futures projections of little value in light of the past and present educational and political climates in California, or are they of greatest priority?

Third, community and professional educational leaders should ask: Do the global dilemmas, and any potential implications for education, have significance for schools and colleges Monday morning, for September, for practical now-oriented programs within current budgets and political realities?

In addressing these three areas, it is important to begin with a search of the theoretical, the alternative possibilities for societal futures. The information technology systems explosion illustrates one of the global factors which may bring major changes in society and education during the eighties and nineties. Daniel DeSimone, deputy director of the Office of Technology Assessment, summarized the

emerging conditions in this field in a report to Congress. He stated: "---The technologies of these systems are awesome in their complexity and the revolutionary pace at which they have advanced. This is one of those rare instances where the term revolutionary --- is appropriate in its literal sense. ---The technologies and capabilities of the information sector have progressed at the most bewildering pace in the history of technological innovation---; the impacts of this electronics revolution will be at least as profound as those of the Industrial Revolution." The implications for the field of education are staggering, yet exciting and challenging. They offer new potentials for learning for millions of people of all ages throughout the country.

A second factor, the ecological conditions of the globe, further indicates that changes in society are certain. Fish populations are but one small example of the growing indicators; the depletion of ocean fishing is a serious warning for humankind. One species, the anchovy, illustrates the increasing worldwide fish genocide. In a recent six month California statistical comparison, year one the anchovy catch was 108,000 tons; year two it was 74,000; this past year, in the same six month period, only 10,000 tons were harvested.

Sardines have disappeared where fished extensively; they are virtually gone from California waters. Anchovies and sardines are a source of food for larger fish - yellowtail, tuna, and others caught in coastal waters. The loss of the small species means no more big fish. Off the East Coast of the United States, cod is basically gone; flounder is almost gone; mackeral is a fish of the past. There is only one ocean.

Such threats to the fundamental biological machinery have been well documented by Lester Brown and the Worldwatch Institute, and have led Jacques Cousteau to state: "My dream is that the Cousteau Society lead a new people's crusade to halt the irresponsible destruction of our life system. ---The pulse of our planet weakens

with poisons in her blood and smoke in her lungs. A rich diversity of animal and plant life, which has always nourished her systems, rapidly disappears. What can we do? We can rise as a human family and force decision-makers to consider life the greatest priority."

A third factor, the dramatic increase in world population, still growing at approximately 2.0 percent per year, has led the United Nations Population Commission to forecast that by the year 2050, world population will be at 11.5 billion, a tripling in just 70 years. Some countries are growing at a rate over 3.5 percent. Latin American growth averages a staggering 2.8 percent. The world food supply continues to be hard pressed to meet these increases, primarily the result of economic and distribution systems which will not let the food get to the people who need it. Millions are starving; megafamines are threatened during the late eighties, along with potential riots and wars over food and water.

It is essential that educators realize that society is changing. Lifestyles, which do affect attitudes, values, and learning are different in the eighties, when compared to the fifties. One out of six K-12 students is from a single parent home; in Connecticut the estimate is as high as fifty-five percent. Working mothers have now reached a fifty-six percent figure. By 1990, there will be for the first time more persons over 55 years of age than students in K-12 schools; they will command enormous political clout. Four of five Americans will be over 18. By 1990, in the 20-24 age range, forty percent will be single. Assuming these projections, compiled by the American Association of School Administrators, prove to be valid, the impact upon school and teacher education programs will be enormous.

As a way of summarizing the belief that the most important area of study now for current school people is the global scene - much more important than Proposition 13, competencies, or standardized tests - "The Global 2000 Report to the United States

President: Entering the 21st Century" is cited. This bluntly worded report to the President of the United States, by fourteen federal agencies, states that the assessment of possible world conditions in 2000 A.D. is basically pessimistic. Degradation of the ecological systems, rising populations, desertification, swarms of insects, denuded forests, world food shortages, skyrocketing oil prices, the have-have not gaps, and breeding grounds for wars are some of the concerns included and data presented to support a pessimistic twenty year period, if people/countries continue business as usual. An optimistic view is possible only if there are changes in values, priorities, and world conditions.

The implications of these global concerns for schools, educators, education are monumental, if the views of most futures writers are correct. Early recognition of the societal impact upon education in the eighties and nineties came in the 1974 book, Learning for Tomorrow. One passage states: "American education is obsolete; it produces people to fit into a reasonably well functioning industrial society, and we no longer have one. The basic assumption draining American education, one both deceptive and dangerous, is that the future will be like the present. Schools are preparing people for a society that no longer exists. ---As society shifts away from the industrial model, schools will have to turn out a different kind of person ---. Schools now need to produce people who can cope with change."

There is mounting evidence and opinion to support the notion that current education systems are obsolescent. The prolongevity research indicates that humans are on the verge of breaking through the aging process. Thus present kindergarten children may have a potential life expectancy of 100 - 125 years. What do people who will be in their prime in the year 2050, assuming society makes it through the coming transitional decades, need to shape their futures? Is 1980 curriculum - history, mathematics, science - new versions of Dick and Jane - taught as separate subjects - really appropriate for the concluding years of the Twentiety Century?

The majority of futures writers have a clear answer - no. They illustrate that instantaneous retrieval of information not only ends jobs in the world of work, it ends subjects in the world of learning. Marshall McLuhan has summarized this view: "The division of the curriculum into subjects is already as outdated as medieval medicine. ---Present patterns of fragmented, unrelated curricula will ensure a citizenry unable to understand the world in which they live."

Yet schools and colleges continue to fragment; most secondary and university programs still have departments of English, science, mathematics, et al; teacher education programs continue elementary and secondary departments, or divisions of curriculum, administration, and educational psychology. Elementary schools have not been much better. Instead of departments, one self-contained teacher has tried to handle fourteen subjects in a compartmentalized approach - reading 9:00 - 10:15; recess 10:15 - 10:30; arithmetic 10:30 - 11:20 et al.

Consider curriculum related to global survival: hunger, industrialization, pollution, resource depletion, war, and population - six components of the whole which could enhance the pessimistic view of the Global 2000 Report. Using hunger as an example, in the current school organization, who is going to cope with hunger? Which department should assume the responsibility: home economics, biology, social studies, industrial arts, mathematics, English or health? All of these can handle parts of hunger, but none of them can consider the whole. None of the teachers in these separate entities are prepared to pull together the interdependent whole, yet hunger is one of the components that may determine a positive or negative human future.

Efforts have been made over the years to change these conditions. T.H. Huxley, in 1880 , proposed to the University of London the elimination of separated compartments of knowledge. Later Aldous Huxley stated: "The trouble with all specialized knowledge is that it is an organized series of celabacies. The different subjects

live in their monastic cells, apart from one another, and simply do not intermarry---. The problem is to try to arrange marriages between these various subjects --- and share the relationships between objective knowledge and subjective experience."

More recently, and on a more practical note, the study released by the National Science Foundation on the adoption of math and science curriculum improvements contained this statement: "The American classroom resembles a medieval castle --- difficult to penetrate, self-sufficient on the inside, yet surviving on only the barest of essentials. ---For twenty years new curriculum ideas have tried to cross over the moat, but few have made it."

While this resistance continues, the electronics revolution rushes ahead, with the potential technology to eliminate most current classrooms within ten years, and to move from a campus oriented to an open university system. A post-literate society is on the verge of arriving; reading will become a luxury, a leisure pastime, or a choice, but not an essential for persons to be better informed, decision making, knowledgeable individuals than ever before.

Yet the 7th grades continue with the bleakness of fifty years past; most still require English, history, science, math, and physical education, along with a semester of art and a semester of music, or some other such fillers. They have period 1, 2, 3 schedules; A, B, C report cards; tardies; notes from home; textbooks. Perhaps even worse is that most colleges still prepare teachers for this antiquity, and administrators, who inspite of the verbal goals exclaimed in graduate courses, continue to perpetuate the system. Is it any wonder that Learning for Tomorrow labeled education today obsolete?

Wilmer Kingsford, writing in Education About Global Development, has provided a guide to the relationship between the future global uncertainties and the present implications for schools. He states: "The need is urgent: education about the planet and its people is education for survival and for reconstruction of a world

that has come perilously close to human chaos. While the wealthier societies may temporarily retain a semblance of tolerable life in the context of planetary chaos, the poorer societies are already reduced to minimal levels of physical existence. Their abilities to sustain life above acceptable standards have been eroded---. If we choose to educate, we must start with ourselves - now---. We need pioneer educators who are not frightened by the global wilderness; ---we need to support them---with tools, research, and training."

These new pioneer educational leaders would have different characteristics. Ron Barnes, in Tomorrow's Educator: An Alternative to Today's School Person, has listed his descriptors of a New Age educator - a person who thinks systematically; accepts and promotes diversity; demonstrates a holistic perspective toward life; strives for self-awareness; promotes interdependence; is comfortable with the unknown; considers human values of highest priority; is experimental; works toward changing schools; has a more open approach to knowledge; and is a true futurist.

The latest Club of Rome Study, No Limits to Learning: Bridging the Human Gap, has shifted from previous emphasis on global resources to the human imperative. The view is that Spaceship Earth can only have a preferable future if people change. Therefore the focus is on closing the gap between where persons in general are in their Industrial Age lifestyles, and where they must go to arrive in the New Age. Futurists believe that institutions attempting to exist on outdated assumptions will soon discover they are trying to survive in a world which no longer exists. To achieve this change, futures writers stress that people will need to consider a personal transformation.

The futures literature is clear; if the opinions are valid, it is time for education to develop new kinds of institutions. The need is to carefully and humanistically dismantle the old institutions before they crumble and possibly take society with them. How such efforts might be launched in 1980, given the reality of the current school climate, may be the most important immediate task

for educa ional leaders.

The ideal way might be to move to the proposed Minnesota Experimental City, designed during the seventies by creative futurists. Though the Minnesota Legislature put a hold on the project, to the extent that it may never be built in that state, the concepts still have global significance. This truly experimental city of 250,000 people built on 60,000 acres of virgin land, only 10,000 of which were to be cemented, partly covered with a Bucky Fuller dome, no cars, waterless toilets, people movers, and the latest electronic revolution systems, was even more exciting related to education. In this city of 250,000, there were to be no schools, no superintendents, no teachers in the conventional terminology, no colleges, and certainly no Schools of Education. The city was designed as a living learning laboratory; everyone was to be a teacher, everyone a learner. Learning was birth to death - a true life-long process.

Though such an approach may not be possible in California school communities in 1980, many of the concepts are immediately transferable to present school and teacher education programs. A futuristic learning system, or greater steps toward the future than occuring in most present schools, can be implemented in a variety of realistic ways now - now meaning 1980 and 1981, with continual growth of the efforts through the eighties and beyond.

How could such developments occur carefully and humanistically, as recommended in the futures literature? Of the many possibilities, one excellent approach is the school-within-a-school method. An elementary school of 20 teachers serves as a concrete example. Seven teachers, in one section of the building, could continue to conduct excellent self-contained rooms, K-6. They could do futuring through classroom units. Another group could offer a modified team approach, perhaps using some of the Individually Guided Education components, with an interdependent futures team as a special feature. A third group of volunteer teachers, in another section

of the building, could develop their MXC (Minnesota Experimental City) learning system. The program would cost no more; the facilities are there, the teachers are there. Students and parents would volunteer to participate in the MXC. Such an approach would offer three options toward the future. Parents, students, and teachers could select the one best suited to their living learning styles - a choice of programs A, B, or C. Such a philosophy would not even change the bus routes.

Consider the opportunities not only for student learning and parent participation in the development of new approaches toward the future, but, in addition, the great potential for pre-service and graduate professional education programs in the colleges. Professors at these institutions, working with their students, would have the opportunity to help design and implement learning systems designed toward the Twenty-First Century. What would this group create to replace the current junior high, if they could start all over again - as in the MXC. No traditions, no ritual - a new learning approach in 1980 at no additional cost - and without disrupting or eliminating the current conventional programs for the people who see those approaches as their preferred avenue to the future.

At the high school level, a large building for 2000 students could contain four centers, each with a unique focus. For example, 525 students might choose to remain in a conventional high school program; 750 might choose a team/flexible schedule Trump model schools project design; 300 might select the Parkway School in the community; but 425 of the 2000 might volunteer for a high school MXC - a new learning system designed by volunteer teachers, students, and parents - and the creativity potential of present colleges of education.

What would the MXC group possibility plan for 1980-81? Perhaps student time in an Imagineering Studio; a Utopia project; a seminar on New Age Values; a workshop on Technological Forecasting; a seminar on Global Survival; a Sociosphere Station for

Human Forecasting; a writing lab creating a scenario; an action lab - working in a handicapped children's hospital; a war simulation experience; involvement in the DOR Center - the disorientation, orientation, reorientation program; a computer dialogue in the Stimulus Center; or a biomedical engineering laboratory experience.

Certainly such a 1980 start is not Twenty-First Century in scope, but it is a break from 1980 programs toward the coming decades. Implemented at no additional cost, and providing the conventional options, the MXC portion eliminates period 1, 2, 3 schedules, and more importantly, the departmentalized segmentation of knowledge. Curriculum becomes interdependent, an essential for the New Age.

How are persons prepared for such optional learning choices - for alternatives within the existing system? Part of the response is in the form of new professional preparation efforts. Current schools of education could organize into four centers. The Center for Contemporary Learning would continue to prepare teachers for what exists; that remains a viable choice. The Center for Transitional Options would prepare people for experiences in a team, flexible approach program. The Center for Community Opportunities would assist leadership toward the Parkway Concepts. The Center for Alternative Futures would prepare new leaders for the development of their versions of the MXC education system in districts throughout the state.

Students and professors would "headquarter" in one of the four centers. However, they could cross-select work and approaches to provide for broad interdependent experiences. All the programs would focus to some extent on the future, with the alternative futures group most heavily engaged. Key windows are essential for such diversified philosophies to succeed: win/win; options; and trust. "In order for me to win, you must win" is a priority belief, replacing the present win/lose - "In order for me to win, you must lose", 5-4 Board vote syndrome. Providing options for everyone is essential. This can be accomplished through trust, which is a basis for New Age education.

If a school-within-a-school with three or four sub-sections seems too bold, try only two. One is not the "regular program" and one the "alternative". Both are regular, both are options. Choices can be provided in large schools of 6000 or small schools of 100. The mechanics are available; the commitment has been lacking in the late seventies. Think of the excitement, the challenge, of possibly creating, or inventing, for the first time, a learning system for the Twenty-First Century.

There are at least ten other mechanical ways to implement or increase futuring in current schools. One is just the increased inclusion of futures topics or units within existing courses and curriculum. A second is the offering of a course at the secondary or college level, usually an elective in the social studies department, or in the curriculum division of teacher education, perhaps titled "Alternative Futures". At the elementary level, units during science and social studies time might focus on cities of the future, transportation in the future, food for the future, the future of outer space, and saving water.

A third approach at the elementary level, a small beginning, but one that holds great development for expansion without upsetting the applecart politically this year, or costing more money, is to help volunteer teachers create every Wednesday, from 1:00 - 2:30, a "Center for the Future". If that title frightens, call it science and social studies. Every Wednesday the teacher in his or her own classroom, for ninety minutes, tries new teaching/learning methods, new facility arrangements, and most important, new curriculum topics. Purposely chosen, and offered in a futures sense, are learning activities related to the future of deserts, forests, water, population, food, families, enoughness, transportation, cities, robots, energy, grasslands, wetlands, nutrition, conflict, peace, fish, technology, weather, oceans, space, and a multitude of others, depending upon teacher interest, student interest, resources available, and current concerns in the local community. Little time is needed for preparation, and little, if any money.

At the high school level, U.S. History can be taught from the perspective of the year 2050. The future of economic systems, wars, racial conflicts, food shortages, energy, social systems, music, sports, religions, et al, can be addressed. Past and present history is interrelated as appropriate, but the focus is on helping students create a preferable U.S. history, rather than memorizing past events.

These briefly identified samples, a few of the many possibilities, do provide credence to the statement that school districts can create futures oriented learning programs, approaches, and systems in the early eighties, leading to the decade and century beyond, within existing 1980 budgets and political realities. What tremendous opportunities there are, not only for teacher education programs to support these efforts, but to lead in the encouragement and creative design of possibilities for the probable coming transformation.

Are these efforts really essential? Are not educational programs currently in operation already preparing people for the future? The answer appears to be a resounding no, if the comments of those currently labeled futurists have validity. Willis Harman, in An Incomplete Guide to The Future, has signaled the need for new apporaches in education. He lists the awesome powers facing people; society now has, or soon will have, the power to: change to an unlimited degree the characteristics of the physical environment of the biosphere; modify without limit the physical characteristics of individual human bodies by means of biological and genetic engineering; alter drastically human social and psychological environment; annihilate large segments of the human race with weapons of mass destruction; change significantly the world that is handed to the next generation.

The futures literature indicates that the changes made thus far in society and education are tantamount to rearranging the deck chairs on the Titanic, or as John Gardner commented: "We are drowning in a torrent of talk, but most of it has only served to raise the noise level".

It appears to be time for schools of teacher education to stop rearranging the deck chairs, to stop drowning in a torrent of talk. It is time to help create preferable educational futures. It is time, as Willie Wonka said, "to make realities out of dreams and dreams out of realities---to be dreamers of the dreams." This is no longer 1990 theory; it is 1980 reality.

A quotation from Beyond Despair and Robert Theobald may summarize the need for new directions: "The future is ours for us to create. But creation requires knowledge, imagination, and perseverance. Will we generate these qualities in sufficient measures to change the world? If we fail to do so, the destruction of the human race is certain; if we should succeed, none of us has sufficient imagination to perceive the potentials of our future".

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